

Claims

Sub. B1

1. A computer system, comprising:
a first non-volatile memory operable to store system start-up routines;
a second non-volatile memory operable to store system configuration parameters, each corresponding with one of a plurality of selected system components;
and
a microprocessor coupled with first and second non-volatile memories and operable to execute the system start-up routines to initialize the system components in accordance with the system configuration parameters.

2. The computer system of claim 1 wherein the first and second non-volatile memories are first and second portions, respectively, of a single non-volatile memory.

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3. The computer system of claim 1, further comprising a volatile memory coupled with the microprocessor and operable to store the system configuration parameters.

4. The computer system of claim 3 wherein the microprocessor initializes the system components in accordance with the system configuration parameters stored in the volatile memory.

5. The computer system of claim 3 wherein the microprocessor is operable to test data validity of the system configuration parameters stored in the volatile memory and, in the case of data invalidity, to initialize the system components in accordance with the system configuration parameters stored in the non-volatile memory.

6. ~~The computer system of claim 3 wherein the microprocessor is operable to test data validity of the system configuration parameters stored in the volatile memory and, in the case of data invalidity, to copy the system configuration parameters stored in the second non-volatile memory into the volatile memory for storage therein.~~

7. A configuration data storage system for a computer system having a microprocessor and a plurality of I/O devices coupled with the microprocessor, the configuration data storage system comprising:

a volatile memory storing a plurality of custom configuration data, the microprocessor being operable to initialize each of the I/O devices according to the custom configuration data;

a first non-volatile memory storing a backup copy of the custom configuration data, the microprocessor being operable to copy the backup copy into the volatile memory in the event the custom configuration data stored in the volatile memory are corrupted; and

a second non-volatile memory storing a plurality of default configuration data, the microprocessor being operable to initialize each of the I/O devices according to the default configuration data in the event both the custom configuration data stored in the volatile memory and the backup copy stored in the first non-volatile memory are corrupted.

8. The configuration data storage system of claim 7 wherein the first and second non-volatile memories are first and second portions, respectively, of a single non-volatile memory.

9. A configuration data storage system for a computer system having a microprocessor and a plurality of selected I/O devices, the microprocessor initializing each of the I/O devices in accordance with a plurality of configuration data stored in the configuration data storage system, the configuration data storage system comprising:

volatile memory means for storing a first copy of a plurality of configuration data customized to the selected I/O devices; and

non-volatile memory means for storing a second copy of the customized configuration data, the non-volatile memory means also for storing a plurality of default configuration data, the microprocessor initializing each of the I/O devices in accordance with default configuration data only in the event that both the first and second copies of the customized configuration data are invalid.

10. The configuration data storage system of claim 9 wherein, if the first copy of the customized configuration data is valid, the microprocessor initializes each of the I/O devices in accordance with the first copy of the customized configuration data.

11. The configuration data storage system of claim 9 wherein, if the second copy of the customized configuration data is valid, the microprocessor initializes each of the I/O devices in accordance with the second copy of the customized configuration data.

12. The configuration data storage system of claim 9 wherein, if the first copy of the customized configuration data is invalid and the second copy of the customized configuration data is valid, the microprocessor initializes each of the I/O devices in accordance with the second copy of the customized configuration data.

13. The configuration data storage system of claim 9 wherein, if the first copy of the customized configuration data is invalid and the second copy of the customized configuration data is valid, the microprocessor replaces the first copy of the customized configuration data stored in the volatile memory means with the second copy of the customized configuration data stored in the non-volatile memory means.

14. A method of operating a computer system, comprising the steps of:

programming into a first non-volatile memory a set of system initialization routines;

programming into the first non-volatile memory a set of default computer configuration parameters;

programming into a second non-volatile memory a plurality of customized computer configuration parameters, each corresponding with one of a plurality of selected computer system components;

testing the customized computer configuration parameters for error;

if the testing indicates an error, executing the system initialization routines to initialize each of the selected computer system components in accordance with the default computer configuration parameters; and

if the testing indicates no error, executing the system initialization routines to initialize each of the selected computer system components in accordance with the customized computer configuration parameters.

15. The method of claim 14 wherein the steps of programming into the first non-volatile memory each include the step of programming into a first reserved portion of a single non-volatile memory, and wherein the step of

programming into the second non-volatile memory includes the step of programming into a second reserved portion of the single non-volatile memory.

16. The method of claim 14, further comprising the step of programming into a volatile memory the customized computer configuration parameters, and wherein the step of testing the customized computer configuration parameters for error includes the steps of:

testing a first validity status of the customized computer configuration parameters stored in the volatile memory; and

if the first status is invalid, testing a second validity status of the customized computer configuration parameters stored in the second non-volatile memory.

17. The method of claim 16 wherein the step of testing the customized computer configuration parameters for error further includes the steps of:

if the second status is valid, copying the customized computer configuration parameters stored in the second non-volatile memory to the volatile memory for storage therein; and

if the second status is invalid, copying the default computer configuration parameters to the volatile memory for storage therein.

18. The method of claim 16 wherein if the first status is valid, each of the selected computer system components is initialized in accordance with the customized computer configuration parameters stored in the volatile memory.

19. The method of claim 16 wherein if the second status is valid, each of the selected computer system components is initialized in accordance with the

customized computer configuration parameters stored in the second non-volatile memory.

20. The method of claim 14 wherein the step of testing the customized computer configuration parameters for error includes the step of performing a checksum test of the customized computer configuration parameters.

21. A method of configuring a computer system having a processor coupled with a non-volatile memory, a volatile memory, and a plurality of I/O devices, the method comprising the steps of:

storing a plurality of default system configuration data in the non-volatile memory;

storing a plurality of customized system configuration data in the non-volatile memory;

storing the plurality of customized system configuration data in the volatile memory;

checking a first validity status of the customized system configuration data stored in the volatile memory;

if the first status is valid, initializing each of the I/O devices in accordance with the customized system configuration data stored in the volatile memory;

if the first status is invalid, checking a second validity status of the customized system configuration data stored in the non-volatile memory;

if the second status is valid, copying the customized system configuration data stored in the non-volatile memory into the volatile memory for storage therein.

22. The method of claim 21, further comprising the step of if the second status is invalid, copying the default system configuration data stored in the non-volatile memory into the volatile memory for storage therein.

23. The method of claim 22, further comprising the steps of:
modifying the default system configuration data stored in the volatile memory; and
copying the modified default system configuration data into the non-volatile memory for storage therein.